Protect Your Garden

WAR GARDEN SERIES 7

Extension Service of the College of Agriculture, University of Wisconsin, K. L. Hatch, Assistant Director

in cooperation with

State Horticultural Society

(Approved by the State Council of Defense)

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L. G. Gentner

If it is worth while to plant a garden, it is worth while to protect it. Insects cause heavy losses to garden crops where no effort is made to control them, while a few simple measures applied at the right time will usually entirely prevent such losses.

One of the first things to do in the spring is to get the garden and fence corners free from weeds. At all times of the season gather up and destroy all old vines, stalks and refuse as soon as the crops are harvested. Refuse and weeds furnish food for insects and shelter them for the winter if left in the garden.

Do not let insects get a start. After they once become numerous on the plants it does not take long for them to do a large amount of injury, especially on young plants. Every insect that you let live through the spring season will produce many more later.

Where insects are few in number and are easily seen, they may be controlled by hand picking and destroying. But in most cases it is much more practical to spray the plants.

Liquid sprays may be applied with a small hand sprayer which can be bought at a small cost. Dust sprays may be dusted through a cloth sack, or perforated tin can or by means of a dust gun.

Use Poisons on These

Poison sprays, poison mashes, or contact sprays may be used to eradicate certain garden pests. Here are some of the most common insects, together with the poisons to use on each of them.

Chewing Insects. Insects that eat the leaves and tender parts of the plants may be controlled by spraying the plants with lead arsenate at the rate of 1 ounce (15 **level** teaspoons) to each gallon of water. When applied to plants with smooth foliage, such as cabbage, it is necessary to add about ½ ounce of common laundry soap to every gallon of spray to make it spread and stick better. Instead of using it as a spray, lead arsenate may be dusted on the plants early in the morning while they are still wet with dew. When used in this way it may be diluted with 3 to 5 times its weight of air-slaked lime or fine dust. Lead arsenate is preferable to Paris green because it remains on the foliage longer, is not so likely to burn the leaves, and is cheaper, especially since the war has greatly increased the price of Paris green.

Be Careful of Poisons

Lead arsenate, white arsenic, and Paris green, recommended in this circular, are deadly poisons, and care should be taken to keep them away from children and domestic animals. Bean plants should not be sprayed after the pods have formed, nor tomatoes after the fruit is nearly full grown. There is no danger of poisoning to the consumer from eating sprayed cabbage because the cabbage head grows from the inside and the outer leaves are removed before cooking. The outer leaves, however, may have enough poison on them to kill stock.

Cutworms cut off young plants near the surface of the soil and eat the foliage of older plants, feeding at night and hiding in the ground during the day. A small number of plants may be protected by cutting the tops and bottoms out of tin cans and placing them over the plants, pushing them well into the soil. Keeping down weeds and thorough cultivating of the soil is also of value. Larger areas may be protected by applying poison bran mash to the soil in the late afternoon or early evening. Either broadcast the material or place in little heaps near the bases of the plants. **Care should be taken to keep poultry and livestock away from it.**

To make up the poison bran mash mix 2 ounces of white arsenic or 4 ounces of arsenate of lead with 3 pounds of bran. Dissolve 1 ounce of salt and 2 ounces of cheap syrup or molasses in a small quantity of water. Then mix all together, adding enough water to make a crumbly mash.

Grasshoppers may be controlled by poison bran mash made up as for cutworms, except that ½ teaspoon of lemon extract or the pulp of ½ orange or lemon should be used instead of the molasses. The mash should be applied in the early morning so that it will not dry out before the insects feed on it. If the grasshoppers keep coming in from neighboring grass fields scatter the mash along the edge of the garden toward the field and renew from time to time.

Plant lice are small, soft-bodied insects which may be found massed together on the under sides of leaves and on tender shoots. They injure the plants by sucking

the juices and for this reason cannot be controlled with arsenate of lead. They may be controlled by applying some contact spray, such as strong soap (preferably fish oil soap) at the rate of one-half pound to 4 gallons of water; or nicotine sulfate, 1 teaspoon to 1 gallon of water with the addition of a little soap. The spray must actually cover the insects and should be forced well into curled leaves. If all are not killed by the first application, the spray should be repeated.

Kill These Directly

Some common garden insects cannot be reached or controlled by sprays, and must be removed by gathering the insects and destroying them, or by destroying their eggs.

Squash bugs cannot readily be controlled by means of sprays. They will collect under pieces of board or burlap and may be gathered and destroyed early in the morning. The reddish brown eggs are laid in clusters on the under sides of the leaves and may be gathered and destroyed.

Repellants Keep These Out

Many insects which cannot easily be poisoned or killed directly may be kept out of the garden to a greater or less extent by the use of repellants—which keep the insects away, even though they do not kill them.

Root Maggots. The cabbage maggot may be controlled on cabbage and cauliflower plants by placing tarred felt discs

about the stems of the plant at the surface of the soil, just as they are being set out. After the maggots have begun to work on the roots there is no practical remedy.

For maggots attacking onions, radish and turnips no satisfactory remedy has as yet been found. Infested plants should be pulled up and destroyed.

Tarnished plant bugs, dull grayish to brownish pests about ¼ inch long, fly readily when disturbed and cannot be controlled with sprays. They may be driven from the garden by dusting the rows with wood ashes, working from one side to the other.

Flea Beetles. These little black jumping beetles are quite often serious on potatoes, tomatoes, cabbages, beans, and similar plants. Arsenates of lead seem to have little effect on them, but they can be kept away from the plants with Bordeaux mixture. In preparing this spray slake 1 pound of lime in 5 gallons of water and dissolve 1 pound of blue vitriol in a separate 5 gallons of water. In separate solutions these materials will keep indefinitely. For application, stir both thoroughly and pour equal amounts of each into a spray can. Mix the two by stirring, and apply as well as possible to both the upper and lower leaf surfaces.

Cucumber Beetles. These yellow and black striped or spotted beetles are also not easily affected by poison, but their food plants, such as cucumber, squash, and melons, can be made unattractive to them by dusting with a mixture of powdered lime and tobacco dust. Mix 1 pound of

tobacco dust in 2 pounds of well-pulverized lime and dust the mixture onto the plants, using a gunny sack or a tin can with small holes in the bottom.

Published and distributed under Act of Congress, May 8, 1914, by the Agricultural Extension Service of the College of Agriculture of the University of Wisconsin, the United States Department of Agriculture cooperating.